

6272-017-3



#57/appeal
brief

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF: :
DETLEF ALBIN ET AL. : GROUP ART UNIT: 3724
SERIAL NO: 08/650,709 :
FILED: MAY 20, 1996 : EXAMINER: DEXTER, C.

FOR: DEVICE AND A PROCESS FOR
COARSELY GRINDING HYDROUS
POLYMER GELS

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APPEAL BRIEF UNDER 37 C.F.R. §1.192

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Appellant herein appeals the final rejection of Claims 28 and 29 in the above-
references application.

I. REAL PARTY IN INTEREST

The real party in interest in the present appeal is Stockhausen GmbH & Co. KG of
Krefeld, Germany.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF THE CLAIMS

Claims 1, 3-11, 14-17 and 19-27 have been cancelled. Claims 2, 12, 13, 18 and 30 have been withdrawn from consideration. Claims 28 and 29 are active and stand finally rejected.

IV. STATUS OF AMENDMENTS

An amendment correcting an obvious error in the dependency of claim 29 is being submitted herewith.

V. SUMMARY OF THE INVENTION

The invention relates to a device for crushing a hydrous polymer gel, comprising two rolls located axially parallel and rotating in opposite directions, between which is formed a nip for the passage of the polymer gel. Aqueous polymer gels are obtained from water-soluble monomers and are manufactured in a number of ways. In general, however, the polymer gels are manufactured in a continuous process and thereby comprise a continuous layer of gel which must be cut to length. The gels may be soft or brittle (page 1, line 2) and thus they are fragile and easily torn (page 2, lines 2-3).

According to a feature of the invention, and referring to the non-limiting embodiment of the figures (using reference numerals for clarity and not for limitation), a device for processing hydrous polymer gel of variable thickness comprises a first cutting roll 11 having at least one axially extending cross-cutting element 17, and a backup roll 12 spaced from the cutting role so as to form a nip. According to the invention, the first cutting roll 11 is mounted over the longitudinal axis of the backup roll 12 such that the smallest distance between the cutting edge of the least one cross-cutting element 17 and the backup roll 12 is

situated below and upstream, in a conveying direction of a hydrous polymer gel to be cut at the nip, with respect to the crown of the backup roll 11. This may be more clearly understood with reference to the attached copy of Figure 1 comprising Exhibit A to the present brief. A line "L" which connects the centers of the first cutting roll 11 and the backup roll 12 is there angled at an angle α in the upstream direction (relative to the conveying direction of the hydrous polymer gel to be cut at the nip) with respect to a vertical line passing through the crown of the backup roll 12 (i.e., the point on the vertical line where the vertical line crosses the circumferential surface of the backup roll). Both the nip between the backup roll 12 and the cutting roll 11, and the smallest distance between the cutting edge of the cutting element 17 and the backup roll 12, are situated at this line L. As is clearly evident from Exhibit A, both the nip and the smallest distance between the cutting edge 17 and the backup roll 12, being online L, are upstream with respect to the crown of the backup roll, relative to the conveying direction of the layer of gel to be cut at the nip. Moreover, the portion of the line L which extends beyond the periphery of the backup roll 12 toward the cutting element of the cutting roll 11 is situated below the crown of the backup roll.

As will be discussed below, a device for processing hydrous polymer gel of variable thickness, in which the cutting roll is mounted such that the smallest distance between the backup roll 12 and the cutting edge of the cross-cutting element 17 of the cutting roll 11, is situated below and upstream with respect to the crown of the backup roll 12, has the advantage that the fragile polymer gel is fully supported by the backup roll 12 throughout the cutting operation and so is less likely to tear before cutting is completed.

VI. ISSUES

The first issue to be considered on this appeal is whether Claims 28 and 29 are definite under 35 U.S.C. §112, second paragraph.

The second issue to be considered on appeal is whether Claims 28 and 29 are anticipated by U.S. patent 4,162,709 (Wilson).

The third issue to be considered on this appeal is whether Claim 29 is obvious over Wilson.

VII. GROUPING OF CLAIMS

Claims 28 and 29 stand or fall together.

VIII. ARGUMENT

First Issue

Claim 28 recites in part: "said first cutting roll being mounted above the longitudinal axis of said back-up roll such that a smallest distance between said cutting edge of the at least one cross cutting element and said back-up roll is situated below, and upstream in a conveying direction of a layer of hydrous polymer gel to be cut at the nip, with respect to a crown of the back-up roll." The Examiner had alleged that the phrase "upstream in a conveying direction of a layer of hydrous polymer gel to be cut at the nip" at lines 8-9 of Claim 28 renders the claims vague and indefinite because "the invention is being positively defined in terms of the workpiece which is not part of the claimed invention.

In a request for reconsideration filed on March 21, 2003, Appellant pointed out that Appellants are entitled to "some latitude in the manner of expression and the aptness of terms...even though the claim language is not as precise as the Examiner might desire."

MPEP §2173.02. Moreover, a claim element may be defined in terms of an unclaimed element (which may or may not be a workpiece) so long as the characteristics of the unclaimed element would be understood by those skilled in the art. See MPEP §2173.05(b); Ex parte Brummer, 12 USPQ 2d 1653 (PTO Bd. of Pat. App. and Int. 1989); Orthokinetics Inc. v. Safety Travel Chairs, Inc., 1 USPQ 2d 1081 (Fed. Cir. 1986). In Orthokinetics, the leg of a chair was defined in terms of the space between the door frame of an automobile and one of the seats. The Federal Circuit there held that this was an acceptable way of defining a dimension of a claim element, so long as this "is as accurate as the subject matter permits." Here, the "upstream" portion of the inventive feature can only be expressed by reference to the conveying direction of the work piece. Moreover, those skilled in the art would be able to determine a conveying direction. Therefore, defining the relative positions of the rolls in terms of the conveying direction does not render the claims indefinite under 35 U.S.C. § 112, second paragraph.

In an Advisory Action issued April 24, 2003, the Examiner responded that the claimed recitation "would not be clearly understood by those skilled in the art and therefore claiming the invention in terms of the workpiece in the manner presented by Applicant is vague and indefinite." As an example of this alleged vagueness, the Examiner postulated that "something upstream of [the layer of hydrous polymer gel to be cut at the nip] would be spaced away from the nip... Of course, this does not make sense because the smallest spacing, as best understood, must be at, or substantially at, the nip."

Appellant respectfully submits that this statement evidences a *misunderstanding* by the Examiner of the clear terms of the claims. Claim 28 recites that the smallest distance between the cutting edge of the cutting element 17 and the backup roll is situated upstream (and below) with respect to the crown of the backup roll. It does not recite, as the Examiner

seems to have incorrectly understood, that this smallest distance is upstream of a layer of hydrous polymer gel. Appellant therefore respectfully submits that the rejection under 35 U.S.C. §112 is a product of the Examiner's misunderstanding of the clear terms of the claims and requests that it be reversed.

Second Issue

Concerning the prior art rejection, Appellant had previously pointed out that Wilson is directed to a sod harvesting and severing device in which sod is delivered by an elevator conveying system 30 to a sod cutter 100 (Figure 2) having a cutting drum 102 and a back-up roll 78. The cut sod is then delivered to a conveyor 116 for storage. However, as is evident from Figure 2 of the reference, the back-up roller 78 is positioned upstream of the cutting drum 102. Therefore, the smallest distance between the cutting drum 102 and the back-up roller is located *downstream* of the crown of the back-up roll, as viewed in the conveying direction of the sod, i.e., **the opposite of what is claimed**. This has the disadvantage that sod is not fully supported by the back-up roll during the cutting operation and is more likely to tear, as opposed to the invention wherein the fragile polymer gel is fully supported by the backup roll 12 throughout the cutting operation and so is less likely to tear before cutting is completed. Amended Claim 28 is therefore believed to clearly define over this reference.

The portion of the Advisory Action directed to the prior art rejections further exhibits the aforementioned misunderstanding of the claims. The Advisory Action states in part: "(i.e., a workpiece that is located downstream of the cutting nip of Wilson so that the 'smallest distance' is situated upstream of the workpiece as claimed)."¹ This again evidences a

¹Advisory Action, p. 3.

flawed understanding that the claim recites that the smallest distance between the cutting edge of the cross cutting element and the backup roll is situated upstream of a layer of hydrous polymer gel, when the claims in fact recite that the smallest distance between the cutting edge of the cross cutting element and the back-up roll is situated below and upstream with respect to the crown of the back-up roll. Again, the Examiner's position is based on an incorrect reading of the clear language of the claim and so this has resulted in an erroneous application of the prior art.

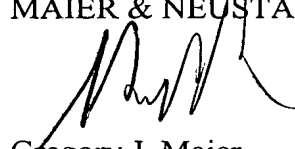
Third Issue

Since the rejections based upon Wilson are based upon an incorrect reading of the clear language of the claims, the claims are equally unobvious over Wilson.

In view of the above, it is respectfully requested that the final rejection of Claims 28 and 29 be reversed.

Respectfully submitted,

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APPENDIX

28. A device for processing hydrous polymer gel of variable thickness, comprising:
a first cutting roll having at least one axially extending cross cutting element including a cutting edge; and
a back-up roll spaced from said cutting roll so as to form a nip,
said first cutting roll being mounted above the longitudinal axis of said back-up roll such that a smallest distance between said cutting edge of the at least one cross cutting element and said back-up roll is situated below, and upstream in a conveying direction of a layer of hydrous polymer gel to be cut at the nip, with respect to a crown of the back-up roll, whereby said at least one cutting edge cooperates with said back-up roll to cut the layer of hydrous polymer gel at the nip.

29. A device of claim 28, wherein said first cutting roll has at least one circumferentially extending cutting element including a cutting edge.